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THE MAM-ZRAU′-TI: A TUSAYAN CEREMONY.

BY J. WALTER FEWKES AND A. M. STEPHEN.

Closely following the Lā′-lā-kon-ti(ta) which has been described,[1] there was celebrated at Walpi another woman's dance called the Mam-zrau′-ti. This ceremony has many points of resemblance to the Lā′-lā-kon-ti, but differs from it in several important particulars. The following observations of the celebration made by one of us in September, 1891, include the more important ceremonials.[2] They began on September 23, and were continued nine days. The secret parts of the celebration were performed in the *Al′-kib-va.*

The following tabular summary mentions the events which took place and their sequence:

September 23d (first day): 1. Sand altar begun in the kib-va. 2. Sā′-li-ko made *kē-lé′-pā-ho*(*s*), a prayer-meal trail, and "house" on the floor. 3. Two girls jumped within the circular meal "house."

September 24th (second day): 1. Sā′-li-ko made the *ñā′-kü-yi pong′-ya* (charm altar)[3] and placed corn about the "charm vessel." 2. *Nā′-nā-ni-vo tūñ-wai′-ni-ta*, or invocation to the six cardinal directions. 3. Marks made on the walls of the kib-va. 4. Cheeks of *kē'-le*(*s*) daubed with two parallel black marks. 5. *Pā'-ho*(*s*)[1] made. *Pā'-ho*(*s*) deposited in the shrines by four maids.

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[1] American Anthropologist, April, 1892.

[2] These observations were made under the auspices of the Hemenway Southwestern Archæological Expedition. The article is one of a series treating of the religious ceremonials of the Tusayan Indians of the village of Walpi, of which those of the summer months from May to August, exclusive of the snake dance, have been published in the Journal of American Ethnology and Archæology, vol. II, No. 1.

[3] *Ñā′-kü-yi*, a syncopation of *ñā′-hü, kü-yi*; *ñā′-hu* (from *ñwā′-ü-ta*, a roof), a charm. "Medicine" scarcely expresses the significance, as it is applied to all remedial agents to combat or remove malign influences originating with sorcerers, demons, or deities. The term *ñā′-hu* is applied to all medicinal agents, but the term *ñā′-kü-yi* is used for all the liquids employed during all religious ceremonies.

September 25th (*third day*): 1. *Pā'-ho*(*s*) made. 2. Limbs, head, and body of the *kē'-le*(*s*) painted. 3. Marks on the walls of the kib-va unceremonially renewed.

September 26th (*fourth day*): 1. Many kinds of *pā'-ho*(*s*) made; *pā'-ho*(*s*) deposited by four maids. 2. Meal ground in neighboring house all day by maids. 3. Several large bundles containing wooden slabs unwrapped. 4. *Mā-zrau'-ti-yo* and *Mā-zrau'-mā-nā* taken out of luted jars. 5. Sand mosaic of clouds and lightning snakes made. 6. Two maids sent out for vegetation for decorations of uprights of altar. 7. Final initiation of the *kē'-le*(*s*). 8. Midnight ceremony, in which many women took part. 9. *Kē-lē'-āc-na*, the head-washing of the novices.

September 27th (*fifth day*): 1. New *nā'-tci* placed on the kib-va entrance. 2. Singing and posturing. 3. Two *pā'-ho*(*s*) made. 4. Many peaches piled up in the middle of kib-va floor. Women, having arranged themselves in semicircle around them, sang and danced.

September 28th (*sixth day*): 1. Dance about peaches in kib-va. 2. Women danced in the *Tcüb'-mo* (Antelope court) imitating the *Hē-hē'-ā Kā-tci'-nā.*[2]

September 29th (*seventh day*): 1. Women disguised as men danced the *Mü-cai'-zrü* in the court. 2. Singing in kib-va at night.

September 30th (*eighth day*): 1. Women made circuit of the village, imitating the men's society called *Tā-tau'-kyu-mûh.*[3] 2. Men poured water on the women and smeared them with mud and filth.

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[1] Sometimes written *bā'-ho.* The differentiation of sounds expressed by *b* and *p* in English is very slight among the Tusayan Indians. The form of plural of *pā'-ho—pa-ho*(*s*)—is adopted to meet the incongruity of an unnatural combination. Variation in spelling among different observers is inevitable, and mutual concessions and agreements can alone lead to uniformity. *Ñ* = *ng*, the *g* sound not prominent. For sounds represented by other letters, see Jour. Am. Eth. and Arch., loc. cit.

[2] For a description of the *Hē-hē'-ā Kā-tci'-nā,* see Journal of American Ethnology and Archæology, vol. II, No. 1.

[3] See description of *Nā-ac'-nai-ya,* Journal of American Folk-Lore, June, 1892.

3. Objects on uprights of the altar cut down. 4. Men and women performed midnight ceremony of the fourth day. 5. Night ceremonies, with procession.

October 1st (*ninth day*): 1. Sunrise ceremony of throwing corn. 2. Women cast corn-husks on the ground and shot arrows into space. 3. Women threw food to the spectators. 4. Public dances with *tā-pü'-i* slabs. 5. Sā'-li-ko demolished the altar. 6. Two rival choruses in the *Tcüb'-mo* gave clamorous thanks for the *Mam'-zrau*.

September 23d (*First Day*).—Shortly before sunrise Sā'-li-ko[1] entered the *Al'-kib-va* with a bundle of fetiches and a circular coil tray containing *hom'-ñum-ni*, prayer-meal. As the sun rose she placed in the straw mat at the entrance the *kel'-tsā-kwā-nā'-tci*, a rod fifteen inches long, to the end of which was attached a cluster of thirty or forty hawk-wing feathers. She then swept the floor and was joined by the old priestess, Sā-kā-beñ-ka, who brought a tray of meal. When they had finished sweeping the floor Nā-pi-on'-si, a third priestess, entered, carrying a bag of valley sand containing about two pecks. The three were barefooted, had their hair hanging loose, and wore the ordinary blue tunic gown. The fourth priestess is paralytic and, from her infirmity, unable to take an active part in the ceremony.

The priestess poured the sand, which was quite moist, on the floor close to the *si'-pā-pu*, patting and pressing it into a smooth ridge, thirty inches long and six inches high, thus making what is called the *tü'-wā-pong'-ya,* sand altar (Pl. I, 8). Sā'-li-ko then took from her bundle a number of long *pā'-ho(s)* and curious fetiches and planted them firmly along this ridge. Having arranged these objects in place, all took a pinch of meal, muttered a prayer upon the meal held close to the mouth, and cast it on the objects in the ridge. They likewise sprinkled meal upon the two *ti-po-ni(s)* and the bundles of *pā'-ho(s)*, which were lying just in front of the ridge. Sā'-li-ko made a cigarette of corn-husk and *pi'-ba* and smoked, puffing smoke to the cardinal points upon her meal-tray and over the objects on the *pong'-ya.* A single wing feather of the small hawk lay upon the prayer-meal in the tray. While the arrangement of objects was called the *pong'-ya,* the altar was not finished for three days.

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[1] Chief priestess in the *Mam-zrau'-ti* ceremonial. Sā'-li-ko, who is of the Snake gens, explains how she came to be chief of the *Mam-zrau'-ti* in the following way: About nine miles southeast from Walpi there is an extensive ruin called A-wat'-o-bi (the high place of the Bow people), which was destroyed in a combined attack by all the other Hopi, when all but a very few of its inhabitants were slain. At this time the people at Walpi had no *Mam'-zrau* society, and one of them, who took part in the attack and who knew the chief *Mam'-zrau* priestess of A-wat'-o-bi, saved her on condition that she would initiate a Walpi woman in the mysteries of her society. The Walpi woman so initiated was of the Snake gens, and was the ancestral aunt of Sā'-li-ko. As in the men's societies chieftaincy is from uncle to nephew, so with the women's it descends from aunt to niece. The names of the four chief priestesses are: Sā'-li-ko and Sā-kā-beñ'-ka, both of whom are called *Mā-zrau'-moñ'-wi*, and each of whom had a *ti'-po-ni; Nā-pi-on'-si*, called the *Ki'-moñ-wi*, and Si-ky'-ā-hoñ'-i-nü-ma, the paralytic woman, who is the *Mā-zrau'-tā-wa'-moñ-wi*, or singing chief.

Toward sunset Sā'-li-ko bent a twig of aromatic sumac into a triangle, wrapping it with cotton string, and fastened at each angle two feathers of the blue bird. The sides of this object were about four inches long. She made two of these triangles, *lü'-wa* (vulva), laid them upon the tray of meal, and then made eight *nā-kwā'-kwo-ci.* She fastened four of these upon each of two straight twigs of sumac. She then tied each with yucca to an ear of white corn, and added one of the straight twigs and a sprig of juniper, thus making a curious bouquet, called the *kē-lē'-pā-ho(s)* (Pl. II, fig. 5). Next with her teeth she split a yucca leaf into threads and made a loose girdle by knotting three shreds together. She fastened in the knots two very small blue-bird feathers. She made two of these, which are called *kiv'-hwu* (womb),[1] and hung them on a peg in the kib-va wall. Just before sunset she took the meal-tray and sprinkled a path of meal (*hom'-ñum-ni püh'-tā-bi*) on the floor from the ladder to the altar on the north side, and from the altar to the ladder on the south side of the kib-va. On the north side, close to the upraise, she made a ring of meal, called the *hom'-ñum-ni-ki-hu* ("prayer-meal house"—Pl. III, fig. 1). She took up the two *kē-lē'-pā-ho(s)* and departed for Hano for two novices (*kē'-le,* pigeon hawk). Sā-kā-beñ'-ka then came in.

About dark Sā'li-ko returned, followed by two girls, one of ten, the other of twelve years, each carrying her *kē-lē'-pā-ho.* When they came down into the chamber they stood on the edge of the upraise on the north side of the ladder. Sā′-li-ko then laid one of the yucca girdles over the circle on the floor, and the oldest girl, prompted by Sā-kā-beñ′-ka, jumped down from the upraise fairly within the ring, which was two feet distant. Sā′-li-ko then lifted the girdle up and down as high as the waist of the girl four times, muttering an almost inaudible invocation to *Mü-yiñg′-wûh* (germ god) to make the girl a fruitful mother. She then broke the girdle and hung it up on a peg just over the circular ring. The girl was again prompted and walked upon the trail of meal to the altar (*pong′-ya*), which she sprinkled with meal received at the time she was given her *pā′-ho*. She then walked on the meal trail (Pl. III, fig. 1) along the south side to the upraise, on which she stepped and sat down, leaning against the south wall.

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[1] Possibly placenta.

The second girl followed the example of the first. It was dark when this was finished, and the two girls sat in the same place, holding their *pā′-ho*(*s*) in their hands. Su′-pe-la[1] took supper with the three priestesses who slept in the kib-va with the girls.

September 24th (*Second Day*).—The *nā′-tci* (upright) was taken in each day at sunset and laid at the altar and set up in the mat at sunrise. Sā′-li-ko brought from her house six ears of corn, a crenellate vessel, and another bag of fetiches. Just after sunrise Sā′-li-ko, Sā-kā-beñ′-ka, the two *kē′-le*(*s*), and the observer were the only ones in the kib-va. Sā′-li-ko took a handful of meal from the tray at the *pong′-ya*, prayed upon it, and then, kneeling about four feet in front of the altar, sprinkled intersecting lines. She placed the crenellate vessel in the center and then arranged an ear of corn upon the lines, beginning at the northwest, where she placed a yellow ear, followed by a blue, red, white, black, and an ear of sweet corn, as shown in the diagram. From her bag she took out six smooth, water-worn pebbles, the largest of which was one and a half inches by three-fourths of an inch in size, and placed them close beside the ears of corn. Beginning at the yellow ear she laid down by it a piece of opaque quartz with a smoky iron streak; at the blue, a piece of the same with a faint bluish tinge; at the red, a piece with a reddish tinge; at the white, a piece of translucent quartz; at the black, a piece of shining black iron ore, and at the last a crystal of bluish quartz. From a small bag she took a large pinch of pollen and put it in the bottom of the crenellate bowl. Sā-kā-beñ′-ka now knelt opposite her and Nā-pi-on′-si entered the chamber and knelt west of the bowl, facing the ladder. She placed a small basin (Pl. II, fig. 6) of *ki′-ñum-ni* (house meal, a fine white meal), which she brought in her hand in front of her. Sā′-li-ko took up her *mó′-si-li-li-ta-wa-a-ya*, shell-song rattle (a *nwe-lük′-pi*, with half a dozen small shells attached, loosely jingling), and Sā-kā-beñ′-ka took an object similar to the *nā′-tci*. They then began to sing in reedy, tuneless strain, unmelodious and very depressing. Nā-pi-oñ′-si did not join in the song, but shortly after they began she arose with her basin of house meal and made four horizontal parallel marks, fifteen inches long, on the north wall of the kib-va; she took a handful of meal and pressed it against the wall, pushing her hand from her toward the west. Thence she passed to the west wall, then to the south, and then to the east wall, drawing the four parallel marks on each, after which she resumed her former place.[1] The song was very long, and at certain passages Sā′-li-ko took up the ears of corn one by one, always beginning at the yellow, and laid them in the bowl with their tips resting in the bottom. Then she took up the pebbles and placed them in the vessel, the observance occupying perhaps six minutes. Before the song began Su′-pe-la brought into the kib-va a bottle of water[2] and again retired, and from this water-bottle Sā-kā-beñ′-ka poured about a pint of liquid into an old oyster can, and then, at Sā′-li-ko's prompting, dropped, at certain strains of the song, a few spoonfuls at a time upon the contents of the crenellate. At another stanza Sā-kā-beñ′-ka took from the vessel the ears of corn in the same sequence in which they were deposited, and aspersed the cardinal points, laying the ears of corn down again in their original position on the lines of meal. After this had been done she picked up her *kel′-tsā-kwā* and in an irregular way beat in time with the song. At the close of three-quarters of an hour the song ceased, and Sā-kā-beñ′-ka took a handful of meal from the tray in front of her and gave a portion of it to Na-pi-on′-si. They both prayed over it and cast it on the *pong′-ya*. Na-pi-on′-si then went out, but the other two priestesses remained kneeling on the floor. Sā′-li-ko, after many efforts, made a corn-husk cigarette, which she lit, puffing whiffs of smoke toward the *pong′-ya*. Later Sā-kā-beñ′-ka did the same. Then they arose, and Sā′-li-ko took the pebbles from the vessel and put them back in her bag, after which she placed the vessel in front of the *pong′-ya* and piled the ears of corn on top of it.

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[1] Su′-pe-la took a prominent part as assistant in the *Lā′-lā-kon-ti*.

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[1] The marking of the walls of the kib-va occurs in the midnight ceremonies of the *Lā′-lā-kon-ti*. See American Anthropologist, April, 1892.

[2] Water from the spring called *Tā-ves′-kya-bi*.

Süñ-o′-i-ti-wa, who is chief of the *Wü′-wü-tcim-tû*, then entered, bringing with him a fragment of black shale, which he put in a small mortar. He took the small hawk feather from the end of each sumac rod in the *kē-lḗ pā-ho* and tied one on the crown of the head of each *kē′-le*. From the meal-tray he took the hawk-wing feather, and from the fireplace a pinch of ashes, which he sprinkled on the feather. Then, approaching the *kē′-le(s)*, he muttered a low prayer, at the same time making circular motions over their heads with the feather, allowing the ashes to fall upon them.[1] When he had returned the feather to the tray he took the mortar and poured a little water on the shale; then with the first two fingers of his right hand he made two parallel vertical marks on each cheek of the novices and immediately went out. Four maids, who had been initiated at former ceremonies, came down into the kib-va and ate breakfast with the priestesses, for throughout all the ceremony they ate all their food here. On entering they prayed toward the *pong′-ya* and cast meal upon it. Sā′-li-ko and Sā-kā-beñ′-ka prepared two sets of each of the typical *cā-kwā́* (blue) *pā-ho* and two sets each of sumac twigs with attached hawk feather, called *nā-ḳwā́-kwoc-ho-tom′-ni*. The *pā́-ho(s)* and a handful of meal were then given to these four girls,[2] who distributed them at *pā-hó-ki(s)* in the four cardinal directions around the mesa. Sā′-li-ko said this was an announcement to the deities at the cardinal points, who are called *nā-nā-ni-vā pac-hih′-tü*, that the *Mam′-zrau* celebrants were praying them to send rain. When these girls returned, after again praying and casting a pinch of meal on the *pong′-ya*, they and the priestesses prepared whitewash from clay brought by Na-pi-oñ′-si. The kib-va was whitewashed thoroughly, several girls assisting, but the roof was left untouched, although the ladder was whitewashed from the floor up beyond the hatchway as high as they could reach. This renovation was called *kib-va-bā-lā′-wi*. After the work was finished the three priestesses and the girls brought down dishes of food and, seating themselves on the main floor, ate their dinner.

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[1] His position as chief of the *Wü′-wü-tcim-tû* society was not the reason why he officiated at the initiation of the *kē′-le(s)*, but because he is chief of the *Kē-le′-nyu-mûh* (Hawk gens). This gens is practically extinct at Walpi, there being only three male members, as kin is traced wholly through the mother, and when these members die there will be no representatives of the Hawk gens left in Walpi.

[2] See description of the four girls who bore the *Lā-lā-kon-ti* offerings, in American Anthropologist, April, 1892.

During the whitewashing the maids restored the two antelope figures depicted on the north wall (Pl. III, fig. 5), using a strip of corn-husk bent over the finger to draw the lines and define the margins. Sā′-li-ko then scraped a little cavity with her finger-nail in the heart of both antelopes and fastened to each a small *nā-kwā′-kwo-ci*, luting the cotton string in place with a pinch of the pigment. This was done to invoke the antelope *Kā-tci′-nā* to assist in bringing rain and other moisture.

The dinner consisted of *pi′-ki*, boiled ears of corn, and a stew containing red peppers, which they sucked and nibbled at and dropped back again into the stew. Thus these were passed from mouth to mouth indiscriminately. The two *kē′-le*(*s*) who sat on the upraise, where they remained throughout, were also given food.

We have referred to the making of the *nā-kwā′-kwoc-ho-tom′-ni* on a previous day, and it may be well now to describe them in detail. The *nā-kwā′-kwo-ci*[1] made by the women consisted of a breast feather of the eagle and a tiny breast feather of the yellow warbler, the quills wrapped together and fastened with a claw-hitch to the ends of a white cotton string, which was double-ply, and extended from the feathers as a short, twisted loop. This string was spun in the kib-va from time to time during the observance.

On this day each priestess made sixteen of these and placed them on her own circular tray on the floor. She arranged the sixteen objects in the tray, feathers toward the brim, strings pointing to the center, in four groups, giving them a cruciform arrangement, and named a group for each of the four cardinal directions. She stripped the leaves from four straight twigs of sumac, leaving the bark intact, and, beginning with the group of feathers named for the northwest, she slipped them on one of the twigs, fastening them equidistant by casting a slip-noose in the loop. Then she placed the twig on the tray in the same place from which she took up the feathers, thus preserving the cruciform arrangement.

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[1] *Nā-kwā′-kwo-ci* is derived from *kwā′-hu*, eagle, the feathers of which are typically employed for this purpose, and *kwā′-cu*, I take; *ho′-tom-ni*, objects in a row with intervals between them.

September 25th (*Third Day*).—Sā′-li-ko and Sā-kā-beñ′-ka made *pā′-ho*(*s*) and *nā-kwā′-kwo-ci* similar to those manufactured yesterday, and these also are distributed by the girls, but to different *pā-ho′-ki*(*s*) from those of the preceding day. Suñ-o′-i-ti-wa and Su′-pe-la ate their food with the three priestesses, girls, and women members, who sat on the south side of the main floor. The *kē′-le*(*s*) were always seated on the upraise when they ate their food. After breakfast Suñ-o′-i-ti-wa took the pigment mortar to the spectators' end of the kib-va, and also took some sprigs of juniper, which he bruised with a rubbing-stone to express the juice on the flags in front of the *kē′-le*(*s*). He poured a little water upon the twigs, and the *kē′-le*(*s*), at his prompting, took pinches of the mass and rubbed their legs from the knee to the ankle, and their arms from the wrist to the shoulder. They also rubbed their breasts with the same. He did not sprinkle the *kē′-le*(*s*) with ashes this morning, but, as on the preceding day, took the black pigment on his fingers and renewed on the faces from temple to chin the marks which had become rubbed off during the night.

Sā-kā-beñ′-ka, taking the house meal basin, renewed the wall marks, and then made four parallel stripes across the long axis of the kib-va in front of the *pong′-ya* on the floor. These floor-marks were of the same length as those on the wall. She then threw four small handfuls of meal against the rafters.

At sunset Sā′-li-ko treated the *kē′-le*(*s*) to a thorough massage. This, she said, was not a ceremonial, but was introduced to relieve the little creatures from the pain of their constrained position, for they have barely moved since they first sat down, three days ago. When they had to perform the needs of nature an old basin was brought down by one of the priestesses and the contents were carried up and thrown over the mesa.

September 26th (*Fourth Day*).—The *pā′-ho*(*s*) of this day was more elaborate and numerous than on the preceding. As yesterday, the four girls distributed them to the shrines, which are more distant, as they were absent a longer time. They all came back breathless within forty minutes, and each took a pinch of meal, prayed, and cast it upon the *pong′-ya* as in previous days.

A Mi-coñ′-în-o-vi *Mam′-zrau* priestess took part in the ceremonies from this time forward, and she treated the two *kē'-le*(*s*) as Suñ-o'-i-ti-wa had done on previous days.[1] A woman and the *kē'-le* priestess went to the house just opposite the kib-va to grind corn and took the two *kē'-le*(*s*) with them. The *kē'-le*(*s*) ground corn in this house all day, and at the time of several visits they, at least the older, were steadily at work.

A crowd of women members of this society now thronged the kib-va. They were from all three villages of the East Mesa, many had infants with them, and abundant food was eaten.[2] Great numbers of *pā'-ho*(*s*) were made to-day by Sā'-li-ko and Sā-kā'-beñ'-ka. Shortly after sunrise Sā-li-ko and Su'-pe-la brought in several large objects concealed in bundles, which they placed against the west end of the kib-va. About noon all the women dispersed, leaving no one in the kib-va except Sā'-li-ko and the observer. Sā'-kā-beñ'ka entered, bringing turkey feathers and willow wands, and Sā'-li-ko, going out, shortly returned with a large jar, on the mouth of which was a *bo'-o-ta* (circular tray) securely luted around the brim with clay, forming a close cover for the jar.[3]

Su'-pe-la then ground fragments of copper carbonate moistened with water. Later he unwrapped the bundles and revealed within them painted slabs of wood forty-four to forty-eight inches long, six to eight inches in width, and from one-quarter to one-half inch thick. All these and all the fetiches they declared to be very old. Su'-pe-la said that these slabs were hewn before they had iron axes, and they certainly looked very ancient. The same priest explained that the reason why the painted designs looked so dauby was be-

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[1] *Mam'-zrau* priestess from Mi-coñ'-ĭn-o-vi. She is also of the *kē'-le* gens and, as there are no women of this gens in Walpi, they had to invite this woman to perform the necessary ceremonies at the initiation.

[2] The kib-va was dense with myriads of flies, which made it a place of torture. The little *kē'-le*(*s*) covered themselves entirely with blankets, but the old women did not seem to fret much on account of the pests.

[3] Sā-li-ko took three or four large peaches, laid them beside the fireplace, and then sprinkled them with ashes, casting it upon them with a circular motion of the hand. She then took them up and went out. Su'-pe-la explained this act as follows: She wished to give those peaches to a girl who had not yet been initiated, and had she not so treated them the *mā'-nā*, on eating them, would become distorted and twisted like that *To-zri'-zri-tā-wüq'-ti*, pointing to a spiral-carved fetich on the *pong'-ya* (Pl. I, fig. 14).

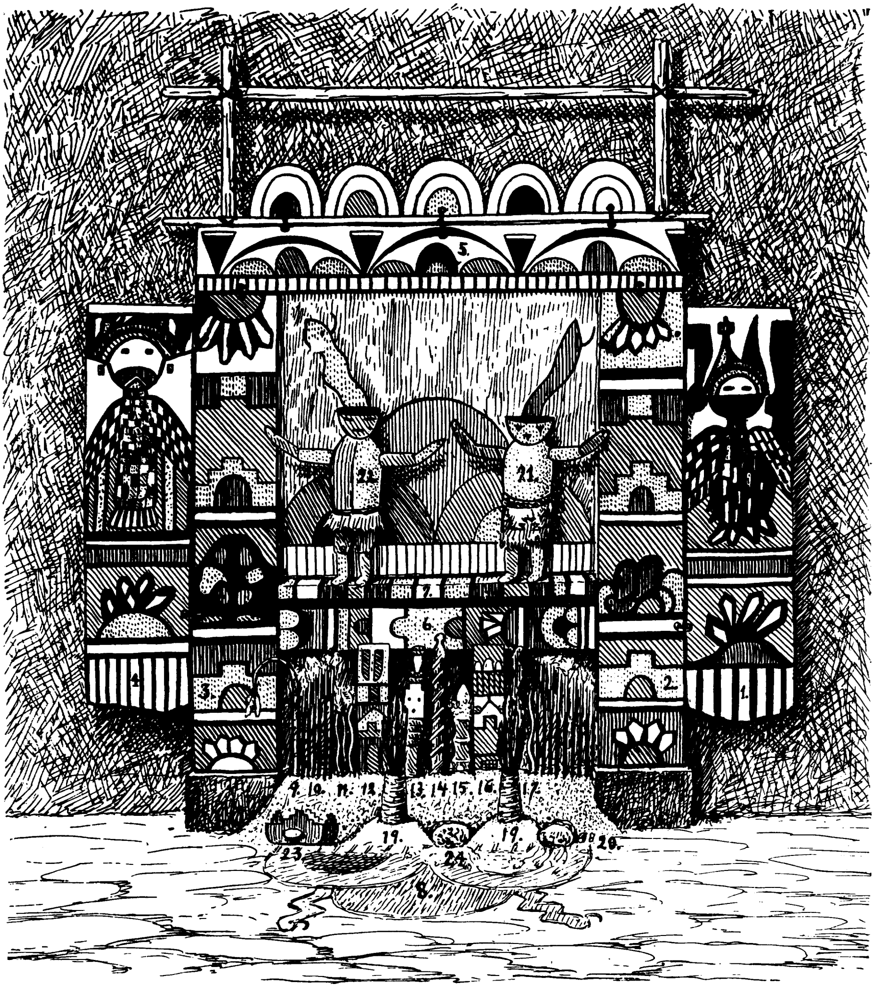

PLATE I.—Mam-zrau′-pong′-ya.

cause they only renewed the paint from time to time and only in the places necessary.

These strips, which had numerous holes bored along the edges, Su′-pe-la then tied together by yucca fibers. Sā-kā-beñ′-ka brought two large lumps of moist clay and laid them at each end of the *pong′-ya* ridge. Ü′-ü-wa, who is Sā′-li-ko's brother and chief of the *Nā-cāb-kib-va,* now entered and assisted Su′-pe-la. They set the cubical stone seats behind the clay lumps and erected a vertical frame (Pl. I) over the ridge. Sā′-li-ko hung necklaces of coral and turquoise upon the figurine of *Mā′-zrau-mā-nā* (Pl. I, No. 4), and she and several other women tied numerous *nā-kwā′-kwo-ci* upon all the objects in the sand ridge, especially on the *tcā′-tü.*

Sā′-li-ko and Sā-kā-beñ′-ka each made two sets of *cā-kwā′-pā-ho*(*s*), and began by scraping off the bark from some willow wands; then, laying the end upon the extended left hand, cut off a piece measuring in length from the wrist to the tip of the middle finger. An ordinary knife is used for this purpose, but they sharpened one end and smoothed the other into a blunt head by rubbing on a block of sandstone. Having prepared four of these little sticks, which are about twice as thick as a lead-pencil, Sā′-li-ko made a paint brush by chewing the tip of a strip of yucca, and, with pigments which Su′-pe-la had prepared during his occasional visits, she painted the sticks a bluish green, except about an inch and a half at the sharpened end, which she painted black. This was called *kwu-map′-hok-ya,* black leg, being analogous to the blackened feet in certain other ceremonies, and, like them, indicates the black of the above, more especially the black rain-cloud. The green body indicates the deity of the southwest, *Té′-vyûña pac-hi′-mü-i,* of whom this is the emblematic color.

While the paint was drying she rolled up a strip of corn-husk so as to form a little, flat, conical pocket, and in this she put a small pinch of *hi′-wa,* sand, brought from the bottom of the Grand Cañon of the Colorado. This was used in veneration of that locality as being the site of the *si′-pā-pu.* She then poured upon the sand a drop or two of honey, "that our corn may be made sweet," she said. Next she added a small pinch of *hom′-ñum-ni,* which she said carried her prayer. As she wrapped up the small package she took up two of the painted willow sticks, holding them close together, and laid this package upon them about half-way between the ends. Beside it she laid a sprig of yellow shrub (*bam′-na-vi—Gutierrezia euthamiæ*), and secured them by a wrapping of cotton string wound around both of the sticks, the string terminating in a feather. The package is called *nü-ci-mo-mok′-pi* (food pouch), and the feather *nü-ci-nā-kwā′-kwo-ci.* The yellow sprig was addressed to the deity of the northwest, *Kwi-ni-wi pac-hi′-mü-i,* whose emblematic color is yellow. On the sides of the sticks opposite to the *nü-ci′-ă-tā* she thrust a breast feather of the turkey, the quill end under the string, the other end projecting two or three inches beyond the blunt heads of the sticks. This feather was called *ü′-ci-ā-tā,* the wrapper, and has various occult significances.[1]

These *cā-kwā′-pa-ho*(*s*) were deposited in the various *pā-ho′-ki*(*s*), at springs or other prescribed places, but another kind, called indifferently *wu′-pa* (long) or *kü′-yi*[2] (water) *pā′-ho,* were deposited only at the various springs. Of these water *pā′-ho*(*s*), the two priestesses each made one. Sā′-li-ko laid a scraped willow upon her left forearm and, measuring from the inner angle to the tip of her thumb, notched the willow at the precise length and cut it off, using this as a standard to measure the others.

She rubbed one end of the long *pā′-ho* to a point and, smoothing the blunt end, she then painted the whole length black except about two inches at the blunt end, which was painted green. She then slipped on four *nā-kwā′-kwo-ci,* arranging them at equal distances along the center, so as to occupy about a third of the length of the wand. At the loop next the blunt end she fastened a "food pouch" and yellow sprig, just as she had done with the *cā-kwā′-pā-ho,* and, in addition to the turkey feather, she also fastened a slip of corn-husk called *cā-lā-ka-bü-ü-ci-ata,* "corn-husk wrapper."

Each of these two women next made one *yo′-yûñ-üla pā′-ho* (Pl. II, fig. 1). They cut off a piece of the scraped willow the same length as the long *pā′-ho,* but, sharpening it at both ends, painted it entirely black. Two *nā-kwā′-kwo-ci* were then looped upon it at about a third of its length from either end. They then twisted some cat-tail rushes (*wi′-po*), and each made an annulet about two inches in diameter and painted it black. This was fastened with cotton

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[1] Its speckled color is said to indicate the all-color of the below; its white tip the foaming water at one of their early deluges, prior to which the whole tip of the feather was black. It is a very general moisture emblem.

[2] The generic term for water is *pā′-hu.* Water contained in a vessel is called *kü′-yi.*

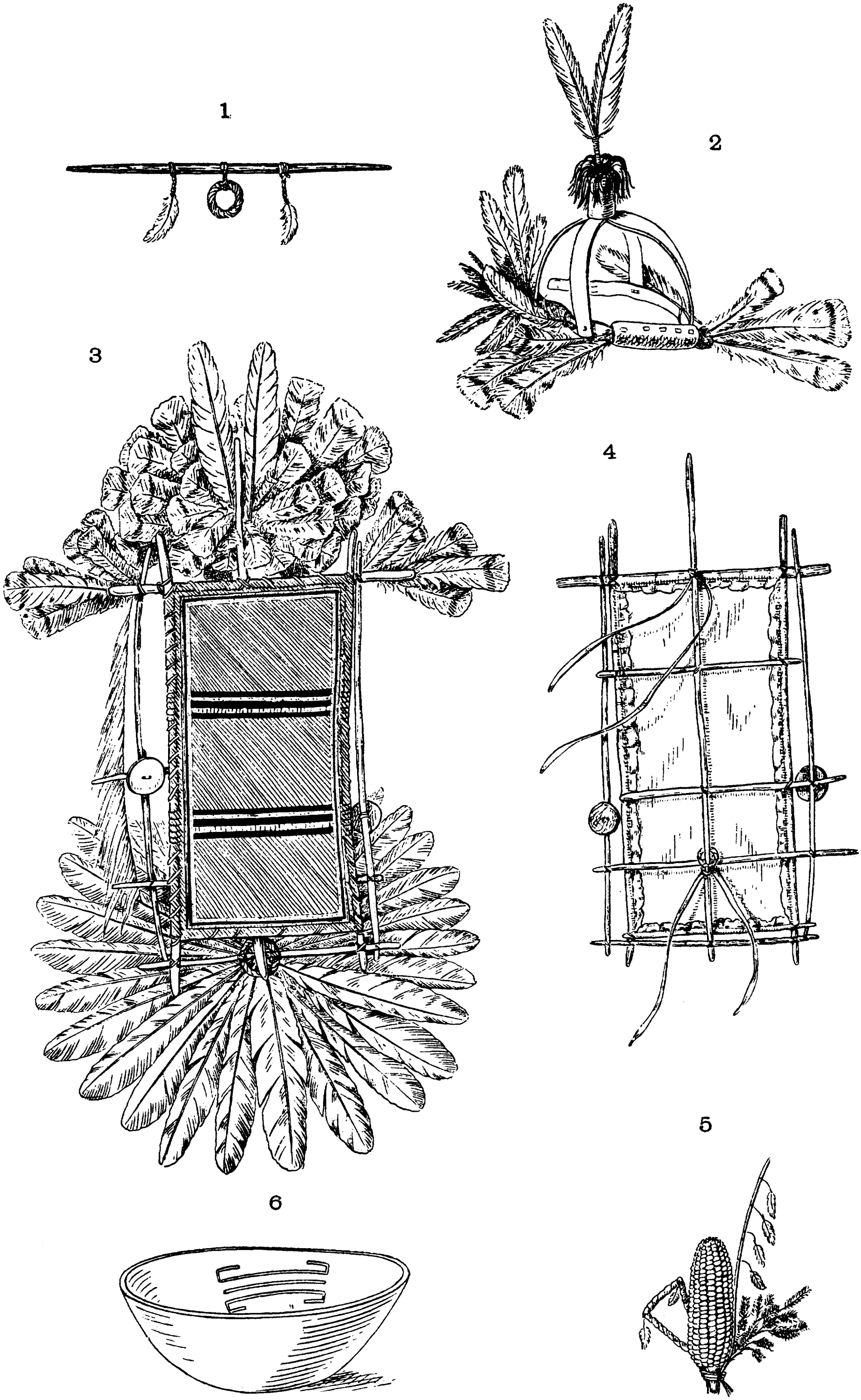

PLATE II.—Ceremonial Paraphernalia.

string to the center of each *pā′-ho*. The annulet is called *yo-yûñ′-üla*, a syncopated term derived from *yo-ki* (rain), and *gnu′-la* (to hurl a disk). The term has reference to the manner of disposing of this *pā′-ho*, but more especially it also signifies their desire that the rain will fall in a circle, so as to embrace all of the adherents of the Hopi religion. It has also a more occult physiologic significance, which need not be dwelt upon in this place.

This *pā′-ho* is thrown into the middle of the walled spring called *Dā-wā′-pā*, and is said to be an offering to *Mü-yiñg′-wûh*, an underworld deity, spoken of as the maker of the germs.[1] They then laid all these *pā′-ho*(*s*) upon one tray and cast a pinch of meal upon them with a short muttered prayer. Sā′-li-ko then made a husk cigarette and smoked *pi′-ba* (native tobacco) over the tray, puffing toward the cardinal points and over the *pong′-ya*. She then passed the cigarette to Sā-kā-beñ′-ka, who did the same.

Sā′-li-ko now opened the luted jar and took out two rude-painted wooden figurines, called *Mā-zrau′-ti-yo* and *Mā-zrau′-mā-nā*,[2] the former fourteen and a half inches, the latter thirteen inches high, and set them on the rain-wood cross-piece, and Su′-pe-la fastened them with yucca string around their necks to the cloth hanging with painted cloud designs (Pl. I, Nos. 22, 21). The floor was then swept, and in front of the ridge Ü′-ü-wa made a sand mosaic picture of *o′-mow-ûh* (clouds) and *tā′-lā-wi-pi-ki*, or lightning snakes (Pl. I, No. 8). These were yellow, green, black, red, and white in color;[3] in other words, he reproduced in sand the designs displayed on the cloth curtain. Sā′-li-ko placed her *ti′-po-ni*(*s*) in front of the ridge, but this time set them upright, imbedding their bases firmly in a heap of prayer-meal (Pl. I, No. 19). She then decorated the vertical *pong′-ya* with corn-stalks, melons, and squash vines, which were brought from the fields by two girls, who were dressed in effective costumes and wore their hair floating down their backs.[4] They were given *pā′-ho*(*s*) when they set out.

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[1] These and other interpretations are subject to revision when the exhaustive account of the *Mam-zrau′-ti* is published.

[2] *Mā′-zrau*, singular; *Mām′-zrau*, plural.

[3] Sā′-li-ko stated that this did not typify the rainbow, but rain from the cardinal directions.

[4] Two girls are sent out for vegetation with which to decorate the uprights of the *Lā′-lā-kon-ti* altar on the fourth day. The ceremony when they were sent out is described, with their costume, in an article on the *Lā′-lā-kon-ti*. See American Anthropologist, April, 1892.

There was no ceremony over the *pong'-ya*, but all except Sā'-li-ko and the observer left the kib-va about sunset. Sā'-li-ko made a meal trail on the floor similar to that on the first evening, except that there was no circle, and just as the sun went down the two *kē'-le*(*s*) were brought to the hatchway and descended. Sā'-li-ko took her shell rattle (*ñwe-lük'-pi*) and stood on the meal trail close to the upraise. Sā-kā-beñ'-ka prompted the elder *kē'-le*, and she, holding her *kē-lē' pā-ho* in her right hand, jumped off the upraise upon the trail, at the same time reaching out the right hand which held the *pā'-ho*, and took hold of the crook of the *ñwe'-lük-pi*, which Sā'-li-ko held toward her. Sā'-li-ko then slowly passed backward, leading the *kē'-le* to the *pong'-ya*, where, as prompted, the novice let go the crook, stooped, and with her right hand took up a pinch of meal and cast it upon the figurines. Sā'-li-ko then stepped on the south trail and held out her crook to the *kē'-le*, who again took it with the right hand, still holding the *pā'-ho* in the right hand, while Sā'-li-ko led her to the upraise. After this Sā'-li-ko did the same to the younger novice, and the two *kē'-le*(*s*) then sat down in their old position on the upraise.

By nine o'clock in the evening the kib-va began to fill with women, each of whom Sā'-li-ko thanked as they entered. They all brought a little meal in the right hand and walked up to the front of the *pong'-ya*, muttered a prayer, and cast the meal upon the fetiches. Each one also brought an ear of corn, which she laid in a pile at the *pong'-ya*. The women sang songs continually, and some of the melodies were very pleasing, but most of the strains were very dreary and monotonous. Their general tenor was a harvest thanksgiving, the same strain being frequently repeated with the substitution of a different word or two describing the various field and garden products. They sang of the beauty of the far-stretching rows of corn and the pleasing task of gathering and husking it. Between the chants were numerous mirthful songs, some of them of sarcastic turn; others were deemed witty, and very broad indeed the wit was.

About eleven o'clock Su'-pe-la brought down the paralytic woman[1] on his back, and she was propped up near the *pong'-ya*, on the south side. She shook down her hair and was given a *kel'-tsā-kwā*. The women were all barefooted, but only the four Walpi priestesses had

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[1] It will be remembered that she is the fourth chief priestess.

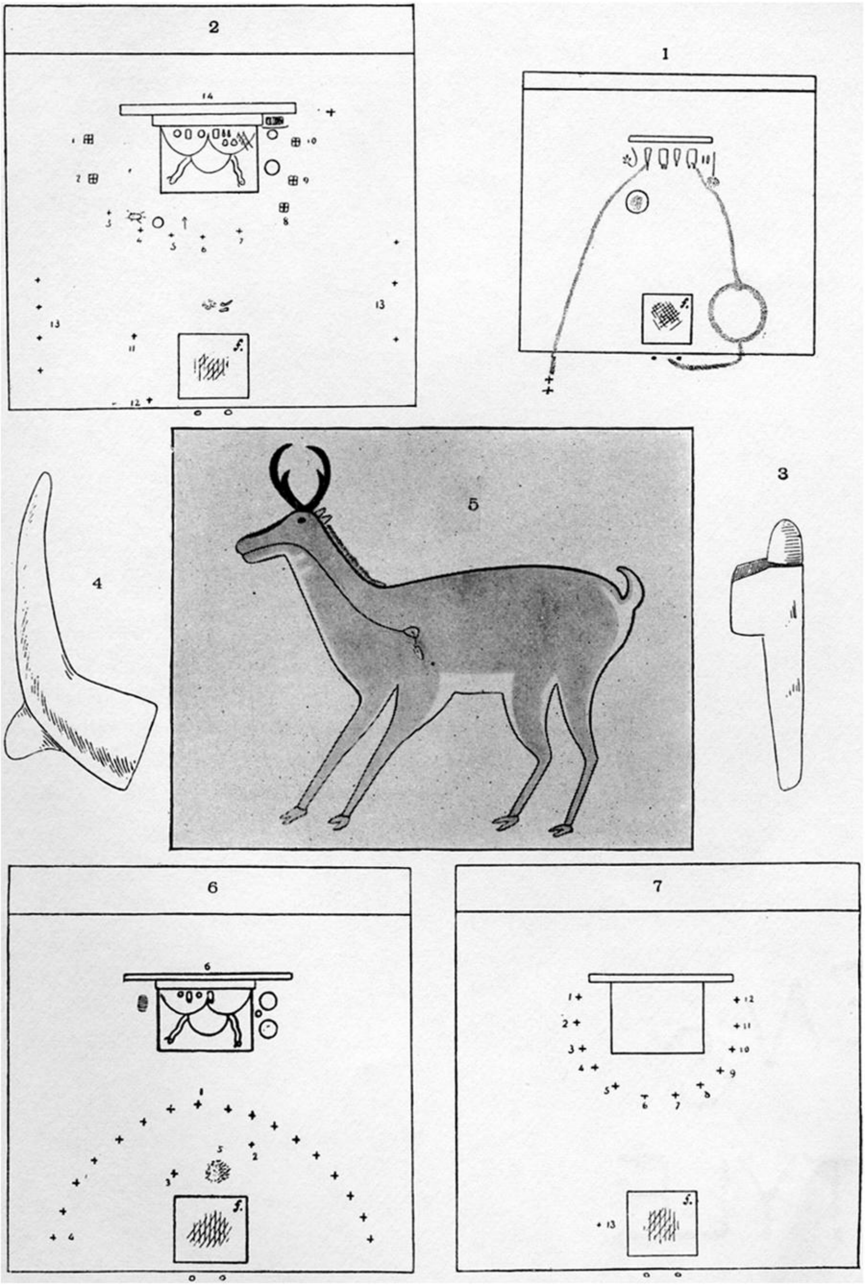

Plate III.—Diagrams of the position of celebrants and kib-va painting.

their hair hanging loose. Just about midnight (11.45 p. m.) Ü′-ü-wa called the observer up the ladder and pointed overhead to the Pleiades and Orion. He said that they had been waiting to begin the real songs[1] till these constellations got overhead.

The men now stripped off their clothing, the women ceased their songs, and both men and the priestesses arranged themselves in a semicircle facing the *pong′-ya* (Pl. III, fig. 2.) Old A-me′-to-la was also present, but did not take any ceremonial part, although he expertly attended to the fire. A large clay pipe, which Sā′-li-ko had brought, was filled and lit by an old woman and passed to No. 7, who, after smoking, passed it to No. 6, and so on, back and forth among the men till the contents of the pipe were smoked out. The meal-tray and crenellate bowl sat in front of Su′-pe-la, who passed the former around, and all taking a pinch of meal, prayed upon it inaudibly and cast it upon the *pong′-ya*. Sā′-li-ko then prayed audibly, to which others expressed thanks in response. Sā-kā-beñ′-ka then prayed and all the men, from No. 3 to No. 7, followed in prayer.

Sā′-li-ko then took up her crook rattle; No. 2, a *kel′-tsā-kwā;*[2] No. 8, an ear of corn; No. 9, a *kel′-tsā-kwā;* No. 10, two cigarettes of reed, four inches long and wrapped with cotton string. These were not smoked, but were used as their name (translated aspergills) implies. The men had nothing in their hands, but sat on their folded mantles, with heels drawn close to their hips and hands resting on their knees. The women wore their ordinary blue tunic gowns, their hair hung loose, and they were barefooted.

After these prayers sixteen songs were sung in two groups of eight each. Just before they began to sing, Su′-pe-la made the cardinal lines with meal on the floor in front of himself, and placed the crenellate vessel upon their intersection. During the fourth song Su′-pe-la, beginning with the yellow, put the six ears of corn and the pebbles in the vessel, sprinkling a little meal on each before picking it up. He then received a gourd of water from Sā-kā-beñ′-ka, who filled it from a large earthen bottle in front of her. He held a pinch of meal toward the northwest and sprinkled it in the vessel. He next held the gourd out in the same direction and then poured a few drops in the vessel, and thus in sequence offered the meal and water to the six cardinal directions while the song was in progress.

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[1] This ceremony is strictly comparable with the midnight celebration described in the *Lā′-lā-kon-ti.* American Anthropologist, op. cit.

[2] So named because the feathers at the end of the rod are the *ke′-le nā-kwā* of former ceremonies.

During the fifth song, beginning with the yellow, he took out the ears of corn, asperging to the six directions in a swift motion with each ear and laying them down in their places on the meal lines.

During the seventh song he received from Sā′-li-ko the *ta-tyok′-pi*, a whistle made from the wing bone of a turkey. Placing it in his mouth, he bent over and put the other end in the water in the vessel and made four gurgling calls. This he did six times, asperging the six directions with the whistle after each group of calls. He then returned the whistle to Sā′-li-ko, who at once put it away in one of her numerous fetich pouches.

Su′-pe-la said that the fifth song is a petition for a profusion of sunflowers, and the sounds he produced are to call swarms of birds to come out and sing upon them, because, he says, when sunflowers and song-birds are numerous there are always copious rains and an abundant harvest.

During the fourteenth song Sā′-li-ko and Sā-kā-beñ′-ka stood up in their places on either side of the *pong′-ya*, and each took a long pole which was leaning against the frame and beat time to the strain by tapping upon the floor. This, Sā′-li-ko said, was announcing to *Mü-ying′-wûh* that they were assembled and they thus called to him to listen.

During the sixteenth song Nā-pi-on′-si took her basin of house meal and marked every one, old and young, upon the left cheek. At the conclusion of the songs Sā′-li-ko said a short prayer, and the men thanked her and arose. Constraint was now removed and the occupants all became astir, going up and down the ladder and moving back and forth, just like a swarming ants' nest, all busying themselves preparing for the *ke-le′-ăc-na*, or the head-washing of novices. Seven or eight large earthen basins were set around the fireplace and several jars of water, around which the elder women squatted, beating yucca roots into shreds and rubbing them in the water until they filled the basins with foamy soapsuds.

Sā′-li-ko directed two of the four maids, mentioned as distributing the *pă′-ho(s)* during the two preceding days, and they brought the *pă-wi′-pü-lü*, two gourds encased in a mesh or network of cotton string, from which they poured a little water in each basin, and then set the gourds back on the *pong′-ya*. Sā′-li-ko still directing everything, each maid took up a *kel′-tsā-kwā* and, dipping the feather tufts in the yucca suds, touched the heads of at least two dozen young girls who were kneeling around the basins. In the early part of the evening each of these girls had chosen a godmother among the women members of this kib-va by giving a handful of meal to the person selected, and three patrons or godmothers then washed the heads of their nominal wards, afterward rubbing the faces, bosoms, legs, and arms with meal. The godmother also took the ear of corn which the child carried in her hand and passed it up and down in front of the child, on whom she bestowed a name, and gave the ear of corn back to be preserved by the child.

Sā′-li-ko laved the heads of the two *kē′-le*(*s*), using the ears of corn of the *kē-le′-pā-ho*, and two of the maids who have been assisting in the ceremonies washed the heads of the *kē′-le*(*s*). The other priestesses also assisted in washing the *kē′-le*(*s*) and rubbing them with meal, and as soon as the dawn was clear enough to see, Sā′-li-ko took the *kē′-le* to the *pā-hō′-ki*, just west of Hano, where they deposited part of the *kē-le′-pā-ho* with prayer.

September 27th (*Fifth Day*).—The new *nā′-tci* was put in the straw matting on the hatchway of the kib-va at sunrise. This *nā′-tci* is called a *tā′-pü-i* (smooth surface), and is a narrow hand *pā′-ho*, eighteen inches long by three in breadth, with cloud decoration. The two *kē′-le*(*s*) were now relieved from restraint, and they came and went at will. Many peaches were brought down into the room and heaped up in the middle of the main floor. Each woman took from the *pong′-ya* her own ear of corn, and, forming in a semicircle (Pl. III, fig. 6) facing the heap of peaches, sang for two hours a song, accompanied by a gourd fiddler. There was some good posturing during this song. Na-pi-oñ′-si renewed the wall-marks, placing the new lines a little to the left of the old. Two sets of *pā′-ho*(*s*) were sent out in the morning and deposited by the girls.

September 28th (*Sixth Day*).—Several new *nā-kwā′-kwo-ci* were looped on the fetiches, but no *pā′-ho*(*s*) were made. Su′-pe-la ground a large quantity of copper carbonate and the women danced around the peaches in the same way as yesterday. Every one ate the peaches after the dance and a fresh supply was brought. Before sunset there were present twenty-five costumed persons, part gaily decorated and part disguised as men, who joined in a public dance in the court.

All rubbed their legs, arms, and bosoms with mud before leaving the kib-va, and several had face decorations. They wore a sheepskin over their shoulders, and in the dance-court they imitated the dance called the *He-he'-ā Kā-tci'-nā.* The women sang in the kib-va from about nine o'clock until midnight, after which they went home.[1]

September 29th (*Seventh Day*).—The women husked great quantities of corn and tied up bundles of beans in chili, singing as they worked. These bundles were afterwards carried to their houses. No sacrificial *pā'-ho*(*s*) were made. Su'-pe-la, Wi'-ki, Suñ-o'-i-ti-wa, and several women made and renovated considerable numbers of *Mam-zrau'-tā-pü'-pā-ho*(*s*).[2] During the afternoon some of the women prepared themselves in men's disguise and others of the younger girls, clad in the prescribed costume, danced the *Mu-cai'-zru,* just before sunset, in the court. All of the disguises were, in their way, artistic and very effective. Six of the young women were dressed as the modern Navajo, in a mongrel costume of shabby clothes, tawdry scarfs, and silver-decked straw hats, and with vermilion semicircled faces. Looking at them from across the court, it was difficult to distinguish them from some young Navajo who were standing just beyond them. As on the last night, the women sang in the kib-va till late in the evening.[3]

September 30th (*Eighth Day*).—All of the men mentioned in the ceremony of the fourth day entered the kib-va shortly after sunrise, and great numbers of sacrificial *pā'-ho*(*s*) were prepared by them as well as by the three Walpi priestesses and also the visiting priestess. New *nā-kwā'-kwo-ci* were made and attached by the men to the fetiches, which already had countless shreds of old strings hanging on them. Ho'-ñi, who wore only a breech clout, made deposits of *pā'-ho*(*s*) at the point of the mesa, carrying also the *dur-nop'-na,* a food offering, given him by Sā'-li-ko. Everybody was busy in preparing *tā-pü-pā-ho*(*s*)[4] in sets of pairs for the public dance of the *Mam'-zrau* (Pl. IV). The men prepared and renovated coronets

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[1] The priestesses slept in the kib-va throughout the nine nights.

[2] All of the *pā'-ho* slabs used by the women in their dance were called *tā'-pü-i*—that is, "smooth song reed."

[3] The same as in the *Lā'-lā-kon-ti*, loc. cit.

[4] *Lü'-ü-kü* (pine) is the prescribed wood of which these slabs should be made.

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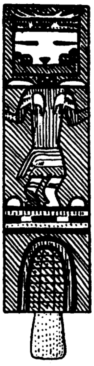

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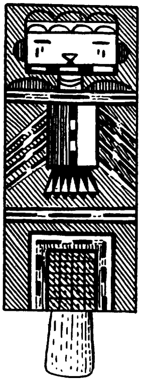

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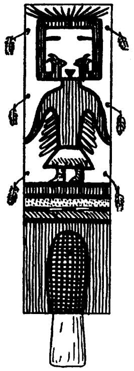

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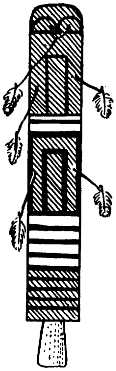

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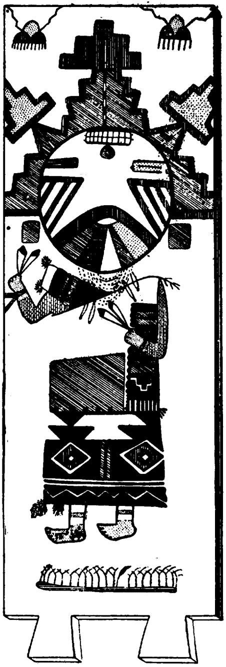

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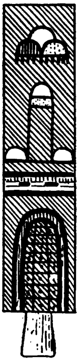

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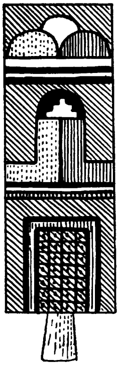

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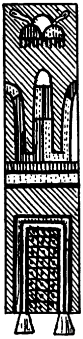

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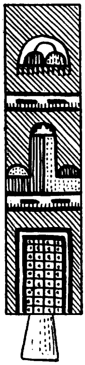

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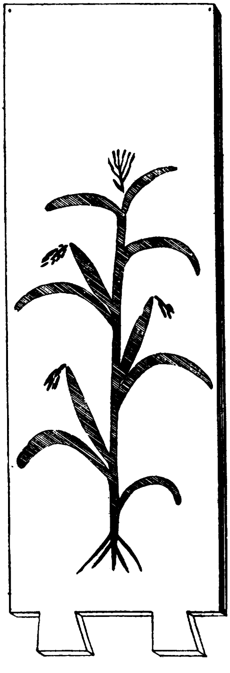

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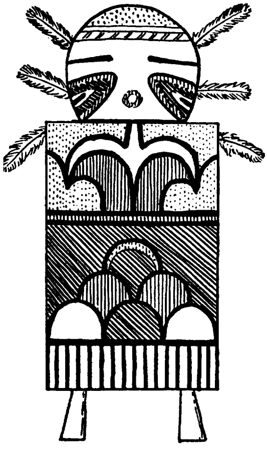

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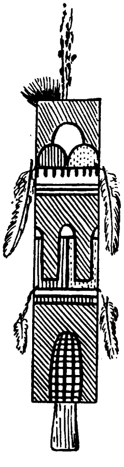

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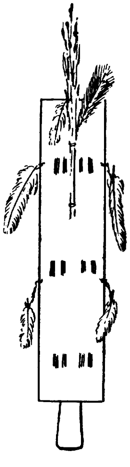

Plate IV.—Ta-pu′-i-pa′-ho(s).

(Pl. II, fig. 2) and tablets (Pl. II, figs. 3, 4) worn by figurantes on the final day. Before sunset twenty-one persons, nearly all young women and girls, came down into the kib-va, wearing nothing but their oldest and shabbiest tunic gowns and girdles. They rubbed their bodies with mud, in the eastern corner of the kibva, as on former evenings, and then decorated themselves by tying their hair up with corn-husk plumes in a cone over the forehead. They adorned themselves with rabbit-skin tufts for ear-drops and necklaces, and painted red (*cu′-tā*) streaks across the face. Each took an ear of corn and one took a drum. Having thus arrayed themselves they made an entire circuit of the village, imitating the *Tā′-tau-kya-mû*,[1] singing and pointing with the ears of corn in a sarcastic fashion to the men, who came to the edge of the house-terraces. They sang many jesting songs, in which they pretended great anger and denounced the men as being lazy and worthless, declaring they had come to kill them as the Apaches used to do. Some of the other songs, as the snow chant ("*Nu-vā′-wü-i-nu*"), and certain moisture chants which were sung were very pleasant melodies.

The men pretended to be angry and poured water on the women, throwing it promiscuously, as a general thing, but in many instances particular young women were singled out, chased, and douched, and thus from house to house the women continued their serenade. About one-half the jars emptied on them contained urine,[2] most of which had been standing long enough to decompose partially, and the stench in the courts was almost overpowering, although a stiff gale was blowing.

A half dozen of the young women were chased by the men (no woman threw any liquid or took part except the celebrants), and these were either thrown down, not violently, or laid down, when overtaken, and when as many as a dozen men had surrounded one woman, they rubbed filth in her hair, on her face, over the upper part of her bosom and neck. They raked this with their fingers from the moist alley corners, and in one instance, at least, a man was seen to rub a girl with ordure. A crowd followed the singers and keenly enjoyed the foul fun. Completing the circuit of the village, on reaching the *Al′-kib-va* they darted down and laid their ears of corn on the *pong′-ya*, but all of the young women ran home, changed their drenched gowns, and gave their hair a rinse. The elder women neither washed nor changed their clothes, but merely laughed and remarked upon the awful stench, but said it would soon pass.

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[1] In *Nā-āc′-nai-ya*, *q. v.* Journal American Folk-Lore, June, 1892.

[2] This is kept for use as a mordant in dyeing.

While the public display was in progress Ü′-ü-wa renovated the sand mosaic on the floor, and Sā′-li-ko and Sā-kā-beñ′-ka, resetting all the fetiches except the vertical objects planted in the ridge, which were in place throughout, freshened and tidied up the *pong′-ya* and its surroundings. The women returned with food, and the kib-va was quite full of feasting women, with whom three or four of the men also ate.

The women sang again, as on the fourth night, and when the Pleiades were in a desired position the same men who were in the kib-va on that evening, with the addition of Wi′-ki and another Antelope Society man, sat in groups around the fireplace, while all the women stood around the walls along the north, south, and east sides. The visiting priestess had a *kel′-tsa-kwa* in her hand, and she stood on the north side next the *pong′-ya.* The women on the same side faced obliquely west, and those on the end and along the south side also stood in the same oblique file. The visiting priestess, however, faced Sā-kā-beñ′-ka, who led the file on the north side. At a signal the visitor began to lead the procession backward across the west end of the kib-va behind the *pong′-ya,* and all the rest moved sideways,[1] following her, one step and a pause, bowing and bending and waving their ear of corn up and down in time with the song, in which all except the men joined. Four times she led them around the kib-va, and then passed her *kel′-tsa kwa* to a young Tewa girl, who then led the procession, as the woman had before her. She, in turn, passed her *kel′-tsa-kwa* to another woman, and thus it went from hand to hand, and the wearisome round continued until nearly half of the participants dropped out exhausted. This processional dance ceased about an hour before dawn, when the men stripped and the group assembled around the *pong′-ya,* as on the fourth night (Pl. III, fig. 7). The same songs and ceremonials followed, but at the end of the first group of songs Su′-pe-la and Ko′-pe-li stood up behind the *pong′-ya* on either side, and when the second group began they cut every yucca fastening of the vertical

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[1] Compare with this the *Klăr-hey′ we* and *Ham′-po-ne* of the Zuñis. Journal of American Ethnology and Archæology, vol. I, No. 1.

pong'-ya framework. As they cut the fastenings of the figurines Sā'-li-ko put them back in her jar, while Ho'-ñi and four girls carried off to the house of Sā'-li-ko all the poles, painted slabs, and other paraphernalia. The vertical objects set in the ridge on the first day were untouched, and the mosaic on the floor remained intact. The group of singers remained in the same place and finished singing the second group of songs.

On returning from depositing the *pong'-ya* objects Ho'-ñi resumed his place and with No. 2, who shook the crook rattle, they sang a very doleful song. Sā'-li-ko took up her *ti'-po-ni*, Sā-kā-beñ'-ka hers, and Nā-pi-on'-si bore the two cigarettes (*mā-kwan'-pi*). They passed around the kib-va, beginning at the northwest corner, and pressed these objects upon the crown of the head of each person in the room. Sā'-li-ko performed this ceremony first, then each of the other two priests, as they did so muttering a blessing. Returning to the *pong'-ya* they pressed the objects on each other's heads and laid their *ti'-po-ni*(*s*) horizontally before the ridge of sand. It was just daylight when all was finished, and many basins were brought down and nearly all, men and women, washed their heads.

October 1st (*Ninth Day*).—*Mam'-zrau* differs from the related summer ceremonials in that no foot-race was observed on the morning of the last day.

Shortly after dawn several young men brought into the village corn-stalks, melon vines, with small melons attached, and other field products, laying them on the roof of the *Al'-kib-va*, where Sā'-li-ko covered them with mantles.

Just as the sun rose the priestesses and about thirty other barefooted women and girls donned their white mantles and fresh, clean, blue tunics, and carried great quantities of corn-stalks with ears attached, from the *Al'-kib-va* to the *Tcüb'-mo* court. They there formed a line and began to sing, waving the corn and throwing it stalk by stalk among the crowds of young men who had gathered.[1] Having finished the distribution, they returned to the kib-va and began decorating themselves for the public dance.

Su'-pe-la, Wi'-ki, Ü'-ü-wa, and Suñ-o'-i-ti-wa assisted in decorating the women who personated the leaders, but the priestesses decorated their legs.[1] When the adornment was completed the members, all in gala dresses with white mantles, holding in each hand either a pair of *Mam-zrau'-tā-pü-i-pā-ho*(*s*) or one of double width with two handles, marched out of the kib-va, and formed a horse-shoe figure, with the ends of the semicircle toward the *Al'-kib-va* or the east side of the *Tcüb'-mo.* On the south end stood Sā-kā-beñ'-ka, then five elderly women, and then Sā'-li-ko, while on the north side were the younger girls and the two *kĕ'-le*(*s*), making twenty-six persons altogether (Pl. V).

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[1] Compare with this food thrown to the assembled young men at the close of the race at dawn on the ninth day of the *Lā'-lā-kon-ti*, op cit.

The leader, Tcā-tu'-ma-ka, had a bright paroquet plume on her head and a maskette over the upper face. She wore a blue woven jacket and a white kilt reaching a little below the thigh. The leg and arm on one side were painted bright yellow and those on the other a dirty green. The arms and legs were also banded in black. A skin tablet or moisture petition, in a frame,[2] painted green, called *pa-vai'-yo-yi-ka-ci,* hung on the back, and a fox skin depended from the girdle over the hips. In her right hand she bore a *tcā-tu pā'-ho* and in her left another fox skin. She faced Sā-kā-beñ'-ka, and as they began to sing she led them around, she moving backward, they with side step, just as in the kib-va before dawn.

Two women wearing coronets, but no tablets and otherwise very similar to the leader, then came from the kib-va. These two, as well as the leader, represented male personages. Each of these two women carried a bow and arrow and a package of corn-husk called *ko-'pi,* a bundle. They began in the main floor of the kib-va by tossing the husk package toward the ladder; then shot their arrows at it. They then picked it and their arrows up, and thus cast-

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[1] The legs are said to be *pā'-ho*(*s*); the decoration is called *Ky-āc'-ve-i-ta.*

[2] This framework was fifteen by seven inches and upon it was stretched a goat skin. The face was painted green, crossed by two horizontal parallel zones of red, black, and yellow bands arranged at equal distances from the ends. Along the longer sides there stretched a fringe of long red horse hair and a gourd disk, *pi-kā'-bik-ho-ya,* or miniature food offering similar to the disks figured in the account of the *Ni-mān'-kā-tci'-nā* (Jour. Am. Eth. and Arch., vol. II, No. 1) hung on each side to the framework. At the angles of the frame were tied three turkey and hawk feathers, and from the position midway between the angles on the small side two tail feathers of the eagle. An immense mass of hawk feathers surrounded these, and on the opposite end of the framework there was a radiating cluster of eagle tail feathers. The screen is now called by the men *Pa-vai-yo'-yi-kā-ci,* and the name *yo-yā'-kya-po* is said to be archaic.

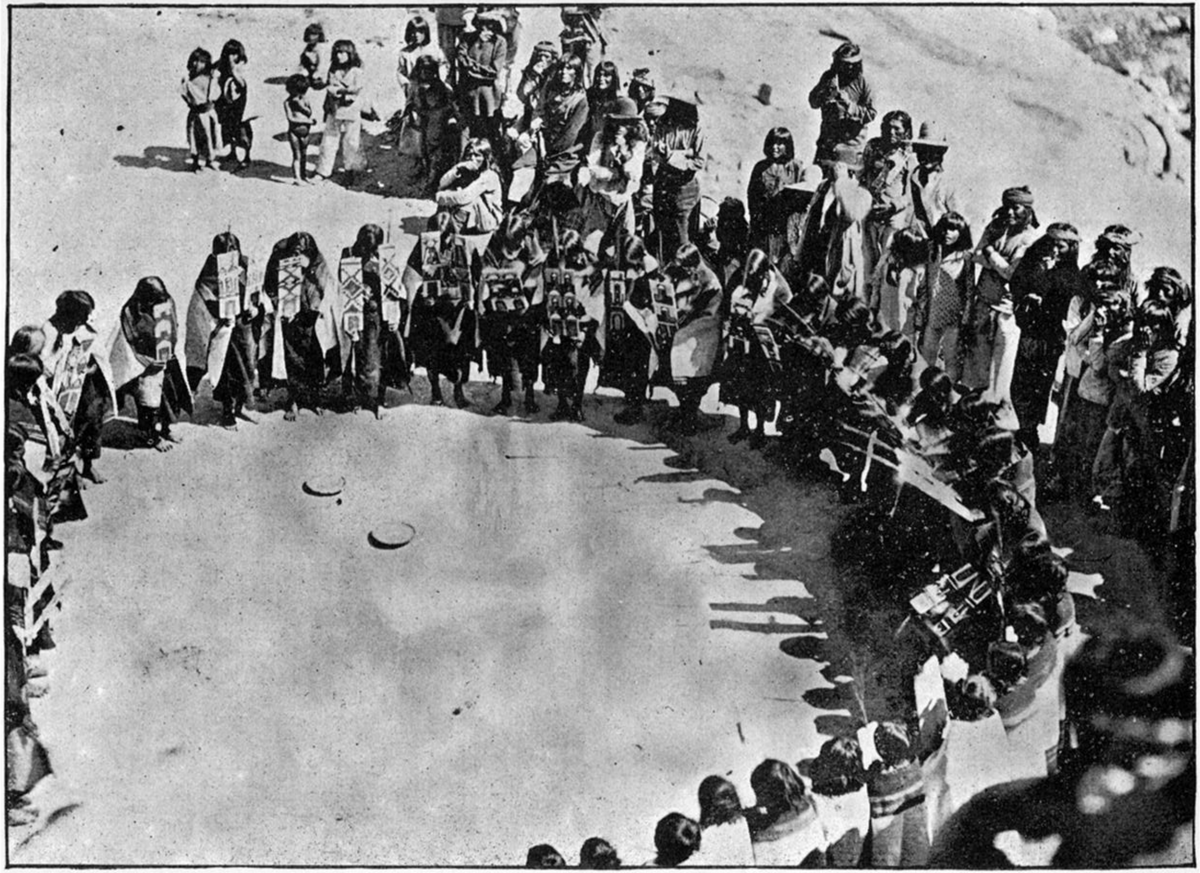

PLATE V.—Public dance of the Mam-zrau′-ti.

ing the package before them and shooting at it, performing this act once or twice, they reached the circle of dancers in the court. They tossed the package into the middle of the circle and shot at it; then, entering the circle, they each shot their two arrows in the air, after which they returned to the kib-va.[1] They are called *Wau′-hi-to-ka*, from *wau′-hi-to*, to cast upwards in all directions, referring to their distribution of the corn-meal nodules. Their act of shooting at the *ko′-pi* is descriptively called *kop-mü-mü′-i-ti-wa* (*mü′-a*, to hit the mark with an arrow), but it is said to typify lightning striking in the corn-field, an event which is regarded as the acme of fertilization.

In the kib-va, meanwhile, a girl had been mixing little nodules of sweet corn-meal and water called *kwü′-mi* (from *kwüm′-lau-wau*, to knead). Each took a trayful of this and returned to the circle, from which they tossed them one by one among the spectators, by whom the objects were eagerly seized.[2]

After this event, which closed this dance, all the women returned to the kib-va. As soon as a trio of maidens were arrayed as the first, all returned to the court and the same events as recorded transpired. This continued through the day, during which seven different trios were observed, but there may have been eight or more in all. The women in the circle held their slab *pā′-ho*(*s*), the decorated side turned from them, all facing inward except the leader, bowing and bending in accord with their song. They sang a successive stanza at each succeeding act. Shortly before sunset Sā′-li-ko gathered up all the objects from the sand ridge in the kib-va; the men obliterated the ridge and picture, Sā′-li-ko sweeping all the sand together in a pile, and all went home.

About an hour after dark a large party of young men came from *Man′-kwa* to the *Tcüb′-mo*, bearing a drum, and began an uproarious *Ho-wi-na* song. Directly afterward another equally large party came from *Tci-vā′-to-ki* and also sang a *Hŏ-wi-na* song, but in strains quite different from the first party. Both parties sang quite independently, each beating its own drum and singing its own song, one trying to drown the sound of the other. They all stood in a huddle, and the smaller ones hung around the outskirts, screaming and howling like demented coyotes, firing pistols, yelling, and thumping their drums till long after midnight. It was explained next day that this was a courteous acknowledgment which the men made to the women for their pious observance of the *Mam′-zrau.*

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[1] Compare these with the two women who accompanied Pi′-tci in the *Lā-lā-kon-ti* (American Anthropologist, April, 1892); also note the similarity in the ceremonials they perform.

[2] In *Lā-lā-kon-ti* basket trays are thrown in the same way. American Anthropologist, loc. cit.

The cooking pits were opened at sunrise of the ninth morning, and a feast served in all the houses, but the kib-va members ate nothing to-day till sunset, when they feasted at their own houses.

The slabs, *Mam-zrau′-tā-pü-i-pā′-ho,* which were carried in the hands of the women in the *Mam′-zrau,* had a variety of forms, which can readily be reduced to very simple symbolic characters. These slabs were made of wood, and have a rectangular shape, with one or two handles. The symbolic decoration is ordinarily confined to one side, which we will call the front. The reverse side was painted white, with three or more pairs of red marks at different intervals.[1] Each pair was composed of two longitudinal marks. To the back of the slab was tied a bunch of seed-grass, a long primary feather, and a breath feather. Upon the rim of the slab on each side, at three equal intervals, is likewise tied a breath feather. The patterns on the front side varied very greatly, but there was present a representation of an ear of corn, which is painted on the lower side continuous with the handle.

This symbolic figure consisted of an oval body, crossed by vertical and horizontal lines, forming squares, in the center of which is ordinarily a dot.[2] When the slab is single-handed the conventionalized ear of corn, as stated above, is painted in continuation of the handle. This fact gives us an interpretation of the meaning of the slab, drawn from its decoration, for it is undoubtedly strictly comparable to the corn ear which is borne in the hands of the dancers in the Zuñi dances, where the ear of corn with feathers tied to it is carried, as I have already described. In the Hopi presentation of the same, however, corn is not carried, but is replaced by a slab with the conventional corn symbol. The other symbolic designs upon the front of the slab consist of rain-clouds, rainbows, terraced lines, and other figures. The figures of faces also exist, and it is possible that in those in which we have the elk (*tcai'-zri-sa*) and other clan symbols represented we may have an indication of the clan to which the dancer belongs. Some of these designs are represented in Pl. IV.

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[1] Various figures are also painted on the reverse of these *tā′-pŭ-i-pā′-ho*(*s*). In the elaborate *Sā′-li-ko*-form which is shown on plate IV, figs. 9, 10, the growing corn is represented in green with red tassels.

[2] The dots are called *cö′-nā-ta,* and depict the living germ in the heart of the kernel.

In a double-handed slab we still have the ear of corn depicted, but represented on the median line of the face, not as a continuation from the handles. Among the highly modified forms of these slabs there is a double-handed specimen which merits a detailed description. No corn is depicted upon this slab, but in its place a rain-cloud ornament with falling rain. This slab, which is in possession of Mr. T. V. Keam, is evidently made to represent a human figure, for the head is cut out on one end. The top is crossed by a red band, with diagonal lines in blue, and the upper rounded rim is spotted. Eyes are indicated by black lines, and upon either side a half oval of concentric bands of yellow, blue, red, and black is drawn. The upper part of the face of the slab is painted yellow, upon which is drawn the growing squash symbol.

The lower portion has six rain-clouds of different colors, and falling rain is represented on the lower edge. Upon the back of this slab there are nine pairs of red lines or bars, and three pairs of breath feathers are tied on its rim.

The highly differentiated slabs (Pl. IV, figs. 9, 10) appropriately have *Sa-li-ko-ma-na* (see legendary origin of corn seed) painted upon them, and the ear of corn replaced by a growing cornstalk.

We have reserved a description of different symbolic designs on the *tā-pü'-i-pā'-ho*(*s*) until a more exhaustive account of the *Mām-zrau'-ti*, when the paraphernalia of the ceremony will be figured.

Many additional investigations have been made on this subject, extending over several years, without being able as yet to give an intelligible account of either the theory or practices in connection with the fetiches. It is hoped, however, that under the present series of systematic observations more adequate results will be obtained.

Sā'-li-ko, and in fact all the chiefs of the various religious societies, are apprehensive lest any of the kib-va secrets be divulged to the unitiated among their own people. Most of them are quite willing to impart any information desired and to afford opportunities for observation, but others are altogether too conservative to see anything but evil in the ethnologist and his note book.

A great many of the notes and other material we have gathered upon this ceremony are scarcely yet in condition for publication, but the design of the present article is more a record of occurrences than a study of significances.

EXPLANATION OF THE PLATES.

Mr. Stephen is responsible for the accuracy of the drawings used in the preparation of plates I to III and a part of plate IV. The observations on the sequence of the ceremonials are also his, as well as the etymological suggestions which are repeatedly made. The work of the senior author pertains to methods of presentation of the subject, observations on paraphernalia, and general comparisons with a related ceremony, *Lā′-lā-kon-ti.*

Plate V was made from a photograph by Mr. J. K. Hillers, of the U. S. Geological Survey, by whom it was kindly loaned the authors for publication.

PLATE I.

Mam-zrau′-pong′-ya.

No. 1. *Mā′-zrau (tā-kā), ti′-yo.*

Nos. 2 and 3. *Tuh′-tü-kwi*, mountains.

No. 4. *Mā′zrau (wüq′-ti), mā′-nā.*

No. 5. *O-mow′-ko-hu*, cloud-wood. This term is applied indiscriminately to the whole framework. The wine-glass objects are called *o′-mow-ci*, cloud-flowers; the top row is *hē′-yāp-ow-ûh*, the cirrus clouds; also the deity associated with *O′-mow-ûh.*

No. 6. *O′-mow-ûh pā′-ho.*

No. 7. *Yo-i′-ko-hu*, rain-wood. The bar upon which the two figurines stand.

No. 8. *Tü′-wa-pong′-ya*, sand altar. *Tü′-wa* is sand, which is their typical soil. The *pong′-ya* made on the floor by Ü′ ü-wa is called *Tü′-wak′-tci-pong′-ya*, earth altar; really *Tü-wa′-kā-tci*, "sand spread out;" but this is the term they apply to land in general.

No. 9. *Nwe-lük′-pi*, a crook, which is nine inches high.

No. 10. *Tcā′-tü.* The longest of these project fourteen inches, and are from three-eighths to one-half an inch thick. On the inside one of the south group Sā′-li-ko fastened a *nü′-ci*, and Sā-kā-beñ′-ka the same on the north group. The significance of these is extremely mystic. *Tcā′-tü* is the name applied to a small insect that infests the *si-vwā′-pi* (*Bigelovia graveoleus*) and sometimes gets upon the person, when its bite causes grievous swellings and sores; but it is particularly abhorred because it is said from its bite upon women first originated *tcă′-tcüs*, syphilis. These *tcă′-tü* are said to be fetich charms against this dread disease, lice, and other body parasites.

No. 11. *Tă′-lă-wi-pi-ki-tcai′-yo*, young lightning, a term applied to the fainter displays of lightning, which are said to usher gentle showers.

No. 12. *Ka′-ü-tü-kwi*, corn mountain.

No. 13. *Tcă′-tü-yu′-ma-tü*, mother of *Tcă′-tü*. This same term is applied to No. 15. The inverted, constricted apical cone is said to be the "*ko-pă′-tco-ki*," or coronet of the long lightning, and the cone on No. 15 is the *ko-pă′-tco-ki*, coronet of the young or short lightning, No. 11.

No. 14. *To-zri′-zri-tă-wüq′-ti*, woman twister. This personage is held in dread and abhorrence, and whenever this fetich was spoken of it was called *pac-kă-lo′-lă-mai*, very bad. She is the mother of painful diseases, and they say when she attacks a person she penetrates like a screw and tries to rend the heart from its place. This fetich is an inch and a half in diameter, with six spiral turns and flat tip.

No. 15. *Tcă-tü yu′-mă-tü*, size two and one-half inches in diameter.

No. 16. *Ma-zrau′ tă-pü′-pă-ho*, the smooth surface of the *Mam-zrau′-ti*.

No. 17. *Tă′-lă-wi-pi-ki yă-că-vă*, long lightning, or that which penetrates the corn-fields and renders them fertile.

No. 18. *Kel′-tsa-kwa*. The *nă-kwă-kwo-ci*, or hawk feather tied to the head of the *kē′le* or novice, is afterwards fastened to this rod. Hence the name.

No. 19. *Ti′-po-ni* of the two women chiefs. The *ti′-po-ni* is the palladium of the society, and every religious society has at least one; others, as in this instance, have two. None of them now in use are claimed to be of supernatural origin, although they are all said to be very old.

No. 20. *Mă-zrau′ mă-kwan′-pi*, aspergill.

No. 21. *Mă-zrau′-mă-nă*.

No. 22. *Mă-zrau′-ti-yo*.

PLATE II.

Ceremonial Paraphernalia.

Fig. 1. *Yo′-yûñ-üla pa-ho*. Length of forearm. The cotton string by which each hawk-wing feather is tied to the black stick is called *pü-cüb′-to-ni*.

Fig. 2. The coronet, *ko-pa'-tco-ki*. Leather framework green; cylinder green, with red horse hair. Apex tipped with eagle feathers. Horizontal ferule, *pa-pü'-bu-ci*, with hawk feathers at each end.

Fig. 3. *Yo-ya' kya-ra* (front view). There are three turkey and three hawk-wing feathers on each upper corner. Size, 15 x 7 inches. *Pi-ka'-bik-ho-ya*, miniature food offering on each side.

Cü-rü'-atu or radiating eagle feathers below. This is formed of ten (too many are represented in the sketch) eagle-tail feathers radiating from a corn-husk annulet, *ci-la'-ka-bü-ñü-lai'-i-yu-ta*.

Fig. 4. Reverse of the *Yo-yā'-kya-ra*. The name now adopted for this skin tablet is *Pa-vai'-yo-yi-ka-ci*.

Fig. 5. *Kē-le'-pā'-ho*: 1, White ear of corn; 2, *Su'-bi*, twig with feathers; 3, Sprig of juniper; 4, *Lü'·wa* (vulva) or triangle of *sü'-bi* with two feathers; 5, *Mo'-hu* (*Yucca augustifolia*) *to-nan'-i-yu-i-ta*, (*to'-ni*, thread; *yu-'ita*, wrapped).

Fig. 6. *Ki-ñum-ni-tca-kap'-ta*, house-meal bowl: 1, *Ha-zri'-ve-ĭ-ta*, angular or twisted, marked; 2, *Cütc-kwi-pi*.

PLATE III.

Diagrams of the position of celebrants and kib-va painting.

Fig. 1. Marks in meal on the kib-va floor (first day, sunrise) showing *Hom-ñum-ni-ki'-hu*, scattering meal house, *Hom'-ñum-ni-pu^h-ta-bi*, scattering meal road, Altar, and Fireplace.

Fig. 2. Diagram illustrating the position of the celebrants in the kib-va during the ceremony of fourth night: 1, Sā'-li-ko; 2, Paralytic woman; 3, Ho'-ñi; 4, Su'-pe-la; 5, Ko'-pe-li; 6, Ü'-ü-wa; 7, Suñ-o'-i-ti-wa; 8, Visiting priestess (*Ke-le'-nyu-mûh*); 9, Sā-kā-beñ'-ka; 10, Nā-pi-oñ'-si; 11, Fleshy woman; 12, A'-me'-to-la; 13, Rows of women; 14, Altar.

Fig. 3. *Cā-kwā'-tco-ño* (blue pipe). Size, 3 inches long.

Fig. 4. *Pū-lā'-tco-ño* (red pipe). Size, 3½ inches long.

Fig. 5. *Tā-kā-tcüb'io* (male antelope). One of two pictures on the north-northwest wall of the *Al'-kib-va*, renewed by the two maids on the second day of the *Mam-zrau'-ti*. Colors, brown yellow, with white on dotted borders of neck, belly, and legs; line to the heart, red. Size: length of body, 33½ in.; from back to belly, 11½ in.; neck, 7 in.; legs, 18½ in. long.

Fig. 6. Position of the celebrants in the kib-va on night of the ceremony of fifth day: 1, Sā'-li-ko; 2, unknown; 3, Wi'-ki's wife, with a Hopi fiddle—*i. e.*, box for a sounding board, scapula, and notched sticks for making noise; 4, maid with *kel'-tsa-kwa*; 5, Pile of peaches; 6, Altar.

Fig. 7. Position of the celebrants on the night of the ceremony of the eighth day: 1, Sā′-li-ko; 2, Si′-kya-hoñ-i-nü-wa; 3, Ho′-ñi; 4, Su′-pe-la; 5, Ü′-ü-wa; 6, Ko′-pe-li; 7, Wi′-ki; 8, Suñ-o′-i-ti-wa; 9, Kā′-tci; 10, Visiting priestess; 11, Sā-kā-beñ′-ka; 12, Nā-pi-oñ′-si; 13, A-me′-to-la; 14, An old woman.

PLATE IV.

Ta-pu′-i-pa′-ho(s).

Fig. 1. *Tcai′-zri-sa*, elk.

Fig. 2. *Kwet′-ca*, probably the same as *kwa′-tca-kwa.*

Fig. 3. *Pā′-lü-lü-kong*, plumed snake.

Fig. 4. *Ta′-pü-i nā′-tci.*

Figs. 5–8. *Wu-pa-mow*, long cloud.

Figs. 9, 10. *Sā′-li-ko;* 9, front; 10, reverse.

Fig. 11. *O′-mow-ûh.*

Figs 12, 13. Reverse and obverse of a slab.

PLATE V.

View of the public dance of the *Mam-zrau′-ti.*

MEYER ON NEPHRITE AND JADEITE.—Dr. A. B. Meyer has just published a paper on nephrite and jadeite in No. 1 of the Abhandlungen und Berichte des Königlichen Zoologischen und Anthropologisch-Ethnographischen Museums zu Dresden, 1890–'91. In the first part of the monograph the original sources of raw material are examined—Schwemsal, Leipzig, Rügen, Jona (Hebrides), China, and America. The second part is devoted to a careful study of blades in Rhineland, Alsace, Weimar, Switzerland, South Tyrol, Italy, Sicily, North Syria, Bering Strait, Japan, and Oceania. The results of Dr. Meyer's study are summed up as follows: 1. The so-called Eslohe nephrite in the museums of Aachen, Bonn, Breslau, and Halle came probably from Schwemsal. 2. No nephrite has been found near Leipzig. 3. The nephrite pebbles from Rügen, Suckow, Potsdam, and Schwemsal lie in a north-northeast and south-southwest line, in the same manner as all the gravels of these regions. 4. No nephrite occurs in Jona (Hebrides). 5. There are in China other sources of nephrite and jadeite than those in central Asia and Farther India. 6. The unwrought jades of St. Marcel, Val d'Aorte, and Ouchy (Italy and Switzerland) are genuine. A flat jadeite blade from Rhineland resembles specially the jadeite from St. Marcel. 7. Two jadeite blades from Rhineland and Alsace resemble middle European and north France specimens. 8. The worked nephrite of Weimar has characteristics of its own (finely schistose) which hint at a local supply of raw material. 9. Worked nephrite and jadeite also come from south Tyrol, undoubtedly from local sources of material. 10. Jadeite blades appear to be scattered all over Italy. Nephrite blades seem to be confined to Calabria, which also points to local supplies of the material. 11. Sicilian worked nephrite bears in part an expressly unique character (the absence of schistose structure and the presence of chlorite) which indicates a local origin. 12. The nephrite and jadeite blades from Asia Minor and thereabouts have more or less of their own characteristics. The raw material of these probably comes from various local sources. 13. The raw material of the nephrite implements from East Cape (Chukchi peninsula) is of local origin or comes from the near neighborhood. 14. The nephrite of a Japanese blade has its own characteristics (schistose lamination and no foreign bodies) which indicate local source of material. The author calls in question somewhat the conclusion of Clarke and Merrill that specific gravity is the best practical means of distinguishing jadeite and nephrite, but his tables (p. 40) show that all jadeites are above 3.27 and all nephrites not only below that, but generally 3 or less. This carefully prepared paper, with its extensive references to authorities and its excellent plates, is indispensable to students of the most interesting of all neolithic materials.

O. T. MASON.

SALE OF HUMAN MILK BY THE HUPA.—A curious occurrence came under my notice in the spring of 1890. A woman of the Hupa tribe of California who could not nourish her babe was in the habit of purchasing human milk from various nursing mothers in the vicinity. She would take a bottle in the morning and get a day's supply—insufficient, of course—and for this privilege gave two dollars a week. The child nearly died of starvation, but began to improve under a more generous diet. It is said that among the Hupa babes deprived of the breast were fed on a thin fluid made by mixing with water the powdered nuts from the immense cones of the bull pine (*Pinus sabiniana*). These nuts are highly nutritious and are delicious, but it is scarcely possible that infants could thrive upon such fare. It is reported, however, that they did thrive and grew up fat.

C. E. WOODRUFF, *U. S. A.*